I. AMENDMENTS

A. In the Specification

At page 1 of the specification, please delete the final paragraph which reads as follows:

In accordance with another aspect of the present invention there are provided isolated nucleic acid molecules encoding mature polypeptides expressed by the DNA contained in ATCC Deposit No. _____.

At page 4 of the specification, please delete the first paragraph which reads as follows:

In accordance with another aspect of the present invention, there is provided an isolated polynucleotide encoding the enzyme of the present invention. The deposited material is a genomic clone comprising DNA encoding an enzyme of the present invention. As deposited with the American Type Culture Collection, 12301 Parklawn Drive, Rockville, Maryland 20852, USA, the deposited material is assigned ATCC Deposit No. _____.

At page 14 of the specification, please amend the first full paragraph to read as follows:

More particularly, the present invention also includes recombinant constructs comprising one or more of the sequences as broadly described above. The constructs comprise a vector, such as a plasmid or viral vector, into which a sequence of the invention has been inserted, in a forward or reverse orientation. In a preferred aspect of this embodiment, the construct further comprise regulatory sequences, including, for example, a promoter, operably linked to the sequence. Large numbers of suitable vector and promoters are known to those of skill in the art, and are commercially available. The following vectors are provided by way of example; Bacterial: pQE70, pQE60, pQE-9 (Qiagen), pBluescript® II KS (Stratagene), ptrc99a, pKK223-3, pDR540, pRIT2T (Pharmacia), Eukaryotic: pXT1, pSG5 (Stratagene), pSVK3, pBPV, pMSG, pSVL, SV40 (Pharmacia).

Please amend the paragraph beginning at line 11 on page 18, to read as follows:

Colonies containing pBluescript® plasmids with random inserts from the organism *Thermococcus alcaliphilus* AEDII12RA were obtained from an original λZAP2 genomic library generated according to the manufacturer's (Stratagene) protocol. The clones were then excised from λZAP2 from pBluescript®. The clones were excised to pBluescript® according to the method of Hay and Short. (Hay, B. and Short, J. *Strategies*, **1992**, 5:16.) The resulting colonies were picked with sterile toothpicks and used to singly inoculate each of the wells of 96-well microtiter plates. The wells contained 250 µl of LB media with 100 µg/ml methicillin, and 10% v/v glycerol (LB Amp/Meth, glycerol). The cells were grown overnight at 37°C without shaking. This constituted generation of the "Source GeneBank"; each well of the Source GeneBank® thus contained a stock culture of E. coli cells, each of which contained pBluescript® plasmid with a unique DNA insert.

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Please amend the last paragraph of page 18, which extends to page 19, to read as follows:

The plates of the Source GeneBank were used to multiply inoculate a single plate (the "Condensed Plate") containing in each well 200 ul of LB Amp/Meth, glycerol. This step was performed using the High Density Replicating Tool (HDRT) of the Beckman Biomek with a 1% bleach, water, isopropanol, air-dry sterilization cycle in between each inoculation. Each well of the Condensed Plate thus contained 10 to 12 different pBluescript® clones from each of the source library plates. The Condensed Plate was grown for 16h at 37°C and then used to inoculate two while 96-well Polyfiltronics microtiter daughter plates containing in each well 250 ul of LP Amp/Meth (without glycerol). The original condensed plate was put in storage – 80C. The two condensed daughter plates were incubated at 37C for 18 h.

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